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10/597,553	07/28/2006	Richard Dean Parkinson	JAGP 0103 PUSA	2690

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EXAMINER

HICKS, CHARLES V

ART UNIT	PAPER NUMBER
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2629

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,553	Applicant(s) PARKINSON ET AL.	
	Examiner CHARLES HICKS	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13-17 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5-11 and 17 is/are allowed.
- 6) ☒ Claim(s) 13-16 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is responsive to amendments filed 02/12/2010. Claim 13 has been amended. Claims 4, 12, 18, and 19 have been cancelled. Claims 20-23 are new. Claims 1-3, 5-11, 13-17 and 20-23 are pending.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13-14, 20 and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by DeWind et al. (US 2006/0164230).

In reference to claim 20, DeWind teaches a touch screen control system comprising a touch screen having first and second conductive layers arranged to be brought together by touching of the screen (DeWind, pg. 14, par. 130; pg. 35, par. 236), and a detection system arranged to detect a contact position at which the screen is touched by monitoring electrical signals from at least one of the layers (DeWind, pg. 14, par. 130; pg. 35, par. 236), wherein the system further comprises an antenna (DeWind, pg. 36. par. 237),

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and the detection system includes a proximity sensing signal generator arranged to generate a proximity sensing signal to be transmitted between the antenna and the first layer via a user of the system (DeWind, pg. 35, par. 236; pg. 36, par. 237),

and the detection system is further arranged to receive the transmitted proximity sensing signal and determine therefrom a distance between a part of the user and the touch screen (DeWind, pg. 35, par. 236; pg. 36, par. 237).

Claim 13 is rejected as being dependent on rejected claim 20 as discussed above and further, DeWind teaches wherein the detection system comprises a touch screen controller arranged to detect the contact position (DeWind, pg. 14, par. 130; touch screen actuated by a user touch of the desired part of the screen),

and a proximity sensing system including the proximity sensing signal generator (DeWind, pg. 32, par. 218).

Claim 14 is rejected as being dependent on rejected claim 13 and further, DeWind teaches wherein the touch screen controller is arranged to receive said electrical signals, including the proximity sensing signal from the touch screen, and the proximity sensing system is arranged to receive the proximity sensing signal from the touch screen controller (DeWind, pg. 32, par. 218).

Claim 22 is rejected as being dependent on rejected claim 20 as discussed above and further, DeWind teaches wherein the electrical signals from the at least one

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of the layers reflect an electrical potential resulting from the first and second conductive layers being brought together (DeWind, pg. 14, par. 130, the display screen may provide a touch screen LCD such as the types described, including a resistive touch screen wherein electrical signals from at least one of the layers reflect an electrical potential resulting from the first and second conductive layers being brought together).

Claim 23 is rejected as being dependent on rejected claim 22 as discussed above and further, DeWind teaches wherein the electrical potential varies depending on the contact point at which the first and second layers are brought together such that no contact point is at the same electrical potential as another contact point (DeWind, pg. 14, par. 130, the display screen may provide a touch screen LCD such as the types described, including a resistive touch screen wherein the electrical potential varies depending on the contact point at which the first and second layers are brought together such that no contact point is at the same electrical potential as another contact point).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeWind et al. (US 2006/0164230) in view of Takahama et al. (US 5,825,345).

Claim 15 is rejected as being dependent on rejected claim 14 as discussed above and further, DeWind however fails to teach wherein the touch screen controller is arranged to send a synchronisation signal to the proximity sensing system to enable the proximity sensing system to determine when it is receiving the proximity sensing signal from the touch screen controller.

Takahama discloses a display device with touch input, analogous in art with that of DeWind, wherein the touch screen controller is arranged to send a synchronisation signal to the proximity sensing system to enable the proximity sensing system to determine when it is receiving the proximity sensing signal from the touch screen controller (Takahama, col. 12, ll. 27-38).

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At the time the invention was made, it would have been obvious to one having ordinary skill in the art to modify the touch screen control system of DeWind wherein the touch screen controller is arranged to send a synchronisation signal to the proximity sensing system to enable the proximity sensing system to determine when it is receiving the proximity sensing signal from the touch screen controller, as taught by Takahama.

As one of ordinary skill in the art would appreciate, the suggestion/motivation for doing so would have been to improve the signal-to-noise ratio of the sensing signal, and to enhance the detection accuracy (Takahama, Abstract).

Claim 16 is rejected as being dependent on rejected claim 15 as discussed above and further, DeWind modified by Takahama teaches wherein the touch screen controller is arranged to transmit the synchronisation signal to the proximity sensing system on the same connection as the proximity sensing signal (Takahama, col. 12, ll. 27-38).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeWind et al. (US 2006/0164230) in view of Robbins et al. (US 3,727,181).

Claim 21 is rejected as being dependent on rejected claim 20 as discussed above and further, DeWind teaches wherein the antenna is within a vehicle having a touch screen control system (DeWind, pg. 35, par. 236; pg. 36, par. 237),

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the proximity sensing signal passing from the antenna and through a body of the user prior to receipt by the first layer (DeWind, pg. 35, par. 236; pg. 36, par. 237).

DeWind however fails to teach wherein the antenna is within a seat of a vehicle.

Robbins discloses a vehicle seat occupant detector with antenna, analogous in art with that of DeWind, wherein the antenna is within a seat of a vehicle (Robbins, col. 1, ll. 19-30).

At the time the invention was made, it would have been obvious to one having ordinary skill in the art to modify the antenna location of DeWind wherein the antenna is within a seat of a vehicle, as taught by Robbins.

Because both DeWind and Robbins teach antenna placement within a vehicle, it would have been obvious to one skilled in the art to substitute one teaching for the other to achieve the predictable result of wirelessly receiving electronic communication in the cabin of a vehicle.

Allowable Subject Matter

Claims 1-3, 5-11, and 17 are allowed.

The following is an examiner's statement of reasons for allowance:

US PG Publication No. 2006/0164230 to DeWind et al. (DeWind) discloses a touch screen control system comprising a touch screen having first and second conductive layers arranged to be brought together by touching of the screen (DeWind,

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pg. 14, par. 130; pg. 35, par. 236), and a detection system arranged to detect a contact position at which the screen is touched by monitoring electrical signals from at least one of the layers (DeWind, pg. 14, par. 130; pg. 35, par. 236), wherein the system further comprises an antenna (DeWind, pg. 36, par. 237), and the detection system includes a proximity sensing signal generator arranged to generate a proximity sensing signal to be transmitted between the antenna and the first layer via a user of the system (DeWind, pg. 35, par. 236; pg. 36, par. 237), and the detection system is further arranged to receive the transmitted proximity sensing signal and determine therefrom a distance between a part of the user and the touch screen (DeWind, pg. 35, par. 236; pg. 36, par. 237); wherein the first layer has two contact elements extending along opposite sides thereof (DeWind, pg. 5, par. 76; pg. 6, par. 79); wherein the detection system is arranged to transmit the proximity sensing signal from the antenna to the first layer (DeWind, pg. 35, par. 236; pg. 36, par. 237); and the detection system is further arranged to transmit the received proximity sensing signal on to a proximity sensing system thereby to enable the proximity sensing system to determine a distance between a part of the user and the touch screen (DeWind, pg. 35, par. 236; pg. 36, par. 237).

US Patent No. 4,435,616 to Kley discloses wherein the detection system is arranged to connect the contact elements to different potentials so that the potential of each of the layers varies with a distance from each of the two contact elements thereby to enable sensing of the contact position (Kley, Fig. 4; col. 1, ll. 5-14; col. 6, ll. 45-63);

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wherein the detection system is arranged to receive the proximity sensing signal via at least one of the contact elements (Kley, Fig. 6, Yout; col. 6, ll. 64-col. 7, ll. 9); wherein the detection system is arranged to receive the proximity sensing signal via both of the contact elements (Kley, Fig. 6, Yout, Xout; col. 6, ll. 64-col. 7, ll. 9); wherein the detection system includes a summing device arranged to sum signals from the two contact elements to produce a received proximity sensing signal (Kley, Fig. 6, Yout, Xout; col. 6, ll. 64-col. 7, ll. 9).

US Patent No. 5,825,345 to Takahama et al. (Takahama) discloses wherein the touch screen controller is arranged to send a synchronisation signal to the proximity sensing system to enable the proximity sensing system to determine when it is receiving the proximity sensing signal from the touch screen controller, and wherein the touch screen controller is arranged to transmit the synchronisation signal to the proximity sensing system on the same connection as the proximity sensing signal (Takahama, col. 12, ll. 27-38).

As to claim 1, the prior art of record fails to teach or suggest “wherein the detection system is arranged to alternate between a touch position sensing mode, in which it is arranged to determine the contact position, and a proximity sensing mode, in which it is arranged to measure said distance between a part of the user and the touch screen”.

As to claim 8, the prior art of record fails to teach or suggest “wherein the detection system is arranged to control at least one connection to the second layer such that the second layer acts as a shield for at least part of the time when the proximity sensing signal is being received”.

As to claim 17, the prior art of record fails to teach or suggest “further comprising a filtering capacitor arranged to be connected between one of the layers and ground during determination of the contact position, but disconnected during measurement of said distance between a part of the user and the touch screen”.

Response to Arguments

Concerning claim 20, applicant’s argue on page 7 of applicants response, that the DeWind reference fails to teach the limitations of a first and second conductive layers arranged to be brought together by touching and a detection system arranged to detect the contact position at which the screen is touched by monitoring electrical signals from at least one of the first and second conductive layers. Applicants further argue that the DeWind reference uses the term touch sensor but that DeWind uses the term in the sense of a touchless sensor that relies on touchless operation to detect presence of an object.

DeWind teaches a first and second conductive layers arranged to be brought together by touching and a detection system arranged to detect the contact position at

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which the screen is touched by monitoring electrical signals from at least one of the first and second conductive layers (DeWind, pg. 14, par. 130; pg. 35, par. 236; pg. 37, par. 237).

DeWind discloses in paragraph 130 that, in Fig. 15, the display screen 60 may be a touch screen LCD, such as those known to one of ordinary skill in the art. DeWind further incorporates by reference US Patent No. 6,627,918 to Getz et al. as an example of a touch screen LCD, wherein Getz discloses a resistive touch device wherein a user may touch a desired part of the screen to actuate a desired function or feature. The resistive touch device detects a user contact position by monitoring electrical signals from at least one of a first and second conductive layers arranged to be brought together by touching, as is well known in the art.

Therefore, DeWind teaches the limitations of a first and second conductive layers arranged to be brought together by touching, and a detection system arranged to detect the contact position at which the screen is touched by monitoring electrical signals from at least one of the first and second conductive layers.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES HICKS whose telephone number is 571-270-7535. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz, can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629